A memoir on the history and physical geography of Minnesota /

A MEMOIR ON THE HISTORY AND PHYSICAL GEOGRAPHY OF MINNESOTA. BY HENRY R. SCHOOLCRAFT, L. L. D.

When France ceded Louisiana to the United States she committed the greatest geographical blunder in her history, excepting the cession of all new France, by Louis XV, consequent on the fall of Quebec in 1759. These two events originally stood in the way of the United States eventually becoming a great and leading power; and their consummation was, as it is now seen, the very turning point of it. With a foreign and non-cognate race, as France is, on our entire northern borders, from sea to sea, and the Mississippi locked up, that great valley was as completely bound as Laocoon in the folds of the serpent. Fortunately, the statesmen of that proud and luxurious court were not wise beyond their generation, and Bonaparte , when he completed the work, by accepting three millions as an equivalent for Louisiana, thought a bird in the hand worth two in the bush. “Bush,” indeed! which has already given origin to a cluster of States, and by the dispute with Texas, a Spanish blunder. has brought along in its magnificent train. California and New Mexico. Already the Mississippi River, if we include the Ohio, has thirteen States upon its waters, not counting Territories, and it furnishes an outlet to the commerce of several more.

“Yet, though no rhyme thy banks to fame prolong Beyond the warrior's chant, the boatman's song, More happy in thy fate than Ganges' tide, No purblind millions kneel upon thy side, Beyond the Nile—beyond the Niger blest, 109 No bleeding Parke —no dying Ledyard prest; Or if one fate foredoomed the Gaul* to bleed, Success o'erpaid and cancelled half the deed. Not in hot sands, or savage deserts lost, A healthful vigor blooms

along thy coast, And ever blest above the orient train, No crouching serf here clanks the feudal chain. E'en the poor Indian, who, in Nature's pride, Serenely scans thy long-descending tide, Turns, in his thoughts, thy course 'twixt sea and sea, And shouts to think that all his tribes are free."

* La Salle.

Minnesota is the last legislative creation upon its waters, and bids fair, at no distant period, to make one of its noblest States. The area of territory comprised by it is computed by Mr. Darby at a fraction under 200,000 square miles; and it would be ample, in mere area, for the formation of three large States, facing respectively the Mississippi and Missouri rivers, including the residuary portion of Wisconsin, some twenty thousand square miles of which, in consequence of the ordinance of 1787, can never be incorporated into a State by itself, and comprehending, also, the large area lying above the mouth of the De Corbeau river, which is, in a measure, sphagnous, or arid. For this, we may deduct 80,000 more square miles, which would reduce it to the compass of two States of 50,000 square miles each.

Taking the distance on the Mississippi west, from the influx of the upper Iowa River, to that of the Crow Wing, it cannot be less than seven hundred geographical miles. The quality of the soil between these points, reaching west indefinitely, is of the richest kind of upland and prairie, and is well-adapted to all the cereal gramina, and to zea maize. Indeed, the latter is raised, in great perfection, in the valley of Red River of Lake Winnepeg, which is N. W. of the source of the Mississippi. In the settlement of Lord Selkirk, the grain crops are unfailing, and are only affected by floods, or other casualties.

In speaking of the agricultural advantages of the Territory 110 —and of its soil and climate, allusion is chiefly had to the area south of Crow Wing, above mentioned, and also to the region on the left bank of the river, between Sandy Lake, or Camtaguma, Mille Lac, and the Rum and St. Croix Rivers.

A Territory, indeed, which gives origin to the Mississippi, and furnishes more than a thousand miles of her banks, or her right and left, can neither be small nor obscure. Such is Minnesota. The first subject that demands attention in the new Territory is the name. It has been frequently asked whether this soft and harmonious name be Indian, and if so, in what language or idiom? We have the authority of some practical enquirers in this matter, for saying that it is a compound Dakota or Sioux word, describing the characteristic bluish green water of the St. Peters River. Whether this phenomenon be due to the sedimentary blue clays brought down from its tributaries; to leaves settled in its bed, or to thick masses of foliage overhanging its banks, under the influence of atmospheric refraction, is uncertain. But the Dakotas who live on its banks were early to notice it at its period of summer depression, and have embodied the description in the term Minnesota. *Min-ee* simply, in the Sioux language, signifies water. The term for river, *wah-ta-pah* , which the natives use as a noun-prefix, is properly dropped in adopting the word into a new language.

By the Chippewas, who live north and east of the Dakotas, this river is called *Oskibugi Seepi* , or the Young Leaf River in allusion to its early foliage, or premature time of putting out leaves; while the more boreal regions occupied by them are still standing in their wintry leaflessness. Compared, indeed, to the shores of Lake Superior, the valley of the St. Peters is an Italy. But to the Saxon and Norman emigrant, who seek the country for its capacities of industrial employment, it has a higher value. The whole of southern and central Minnesota, is eminently suited to the zea maize and 111 the entire family of the cereals. There is no part of the great west better adapted to wheat, corn and the leading staples of northern agriculture. The St. Peters has long been noted, among travelers, for its precocious and blooming gardens, and it is found that the sylvan basin of Lake Pepin, and the valleys of the St. Croix, the Issati, or Rum river, with the St. Francis, Carneille, Saukis, and higher tributaries, are equally rich in their floral character and power of vegetation. Profitable agriculture must extend, township by township, to the DeCorbeau; and it must be borne in mind, that Indian corn which cannot be cultivated at Sault Ste

Marie, in latitude 46° 30#, is raised by the Indians annually, and ripens early in August, at the very sources of the Mississippi and at Red Lake, north of them. The latter point is but a few seconds south of north latitude 49°.

Meteorological observations made at Forts Snelling and Atkinson, for many years, indicate a highly favorable climate; at the latter post, the maximum heat, for the months of May, June, July and August, 1848, was 82°, 88°, 84°, 81°, respectively; the mean temperature, during the same months, being, in their order, 63°, 65°, 71°, 62°, and the minimum 36°, 47°, 51°. Thunder showers are frequent in those latitudes, and even on the higher tributaries of the Mississippi. The amount of free electricity is thought to produce local currents which mitigate the sultriest days. Thirty seven inches of rain fell at Fort Atkinson in 1848.

By Observations made at Sandy lake in July, 1820, (vide Schoolcraft's Nar. Jour., Pub. Ex. p. 263,) the maximum heat at that high point is shown to be 60° and the mean temperature between the 17th and 24th of the month 73°, which is a little *higher* than the entire monthly average heat in 1848 at Fort Atkinson, lying some four hundred miles atmospherically, south. Probably the entire month would 112 sink the northern average a couple of degrees, showing a remarkable equality of summer temperature over a very wide range.

Volney appears to have been the first observer to notice the prevalence of a valley current, from the tropical latitudes up the Mississippi—a remark in which he is sustained, at later dates, by Dr Drake and Dr. Hildreth . It is evident, from the scanty materials we possess, that this gulf current does not spend its force until it has well nigh reached the southern terminus of the Itasca summit. It is certain theft the extreme upper Mississippi escapes those icy winds from Hudson's and Baffin's bays, which are often felt, during the spring months, in northern Michigan and northern Wisconsin. The same latitudes which cross the lake country, give a milder climate in the valley of the upper Mississippi. One of the causes

of this phenomenon has probably been noticed above. Others will doubtless be found by a scientific scrutiny of its meteorology. Mr. Epsy will enlighten us.

Longevity must characterize a country without fevers or congestions. Surgeons, who have been stationed at the military posts of Minnesota and the upper Mississippi, generally give a very favorable view of its diseases and their diagnosis, under the effects of the climate. Malignant fevers seldom or never originate. in these longitudes, north of latitude 44°. It is also well known that the cholera, which in a single instance, in 1832, was carried by a steamboat as high as latitude 46°, did not spread at that sanitary point, namely, Michilimackinac, but was confined south of the general latitude of 43° to 44°, which is, according to the late Dr. Forrey , very nearly the northern isothermal line. Both Green Bay on the east and Prairie du Chien on the west, of Wisconsin, escaped its ravages. So far, however, as fevers and malignant diseases have been locally compared, 113 there is a decided tendency to pass the lake latitudes in the Mississippi valley.

Both banks of the Mississippi, within the boundaries of Minnesota, are quite elevated. This elevation is rocky, and often precipitous, at the river's brink, as high as St. Anthony Falls. Above that point, which is, according to Nicollet , in latitude 44° 58# 40#, a succession of elevated plains, with forests of the drift stratum, come in, and characterize both banks, as far up as Sandy Lake, and with intermissions, quite to the fails of Puckaguma. The consequence of this elevation is that its waters, which reveal themselves abundantly in pure springs, lakes, and streams, flow into the Mississippi with rapid currents and cascades, presenting numerous seats for hydraulic works. At these works the pine forests of Minnesota may be readily converted into lumber, to supply the central and lower portions of the Mississippi. The falls of the St. Croix, of the Chippewa, and other tributary streams, have already been occupied in part with such works. At the falls of St. Anthony, where the Mississippi drops sixteen and a half feet perpendicular,* with strong rapids above and below, its power may be thrown, by a series of mill canals, upon almost any amount of machinery. This point, which is distant nine hundred miles above St. Louis, and two thousand and two hundred miles from the Gulf, is the true head of steamboat

navigation, and must become an important manufacturing city and point of transhipment. In a future state of the country, steamboats of moderate tonnage may be built above the falls, to run, during the freshets, as high as Comtaguma, or Sandy Lake, and Puckaguma. They may also ascend the De Corbeau to the mouth of Leaf River.

* Pike.

The topography and general geography of Minnesota 114 cannot be well understood without giving full prominence to the character, course, and origin of the Mississippi.

Geologically considered, the Mississippi River originates in the erratic block-groupe of drift stratum of the north, in longitude 18° west of Washington, and north latitude 47° 13# 35#, agreeably to Mr. Nicollet . This stratum developes itself in a prominent range of sand hills, once perhaps naked ocean dunes, which throw out copious springs of the purest water on all sides. These infant sources of the “father of rivers,” first gather themselves together in a handsome lake, called Itasca, or La Biche, of some five miles in length, whose shores are surrounded with deciduous trees—pines being in sight on the neighboring ridges, and having a beautiful island near its centre, rich with the foliage of the elm, wild cherry, soft maple, and other northern species. From this take the Mississippi sets out on his wonderful course of more than 3,000 miles to the Gulf, by an outlet sixteen feet wide, with a depth of fourteen inches—making a body of pure crystal water, gliding rapidly over its sandy and pebbly bed, in which the traveler, as he shoots along in his canoe, can see the broken white and pearly i valves of the unio, and other fresh water shells of the lake, scattered in its bed.

Thus much topographically. This great northern drift stratum, which constitutes the height of land, rests on a broad range of the crystaline or primary rocks, which cross the continent, between latitudes about 44° to 50°, linking together the mountain group of the Labrador and Hudson's bay's coasts with the Rocky Mountains. To these broad ranges and mountain outbreaks as they are developed, west of James' Bay and north of

Lake Superior, *Bouchette* , the geographer of Canada, has applied the name of Cabotian mountains, in allusion to the true discoverer of north America.

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Agreeably to this theory, the St. Louis River, which falls into the head of Lake Superior, presenting a series of magnificent views and cataracts, passes transversely through the Cabotian chain, while the Rainy Lake, and the Lake of the Woods, lie north of it. This range of transverse rooks, which, with all its diluvial and drift covering, does not rise over 1,600 feet above the ocean, may be said, by its “rocky roots,” to continue west from the Itasca highlands, and to divide the waters of the Upper Missouri from those of the Saskatchiwine and Assinaboin valleys of Red River and Lake Winnepec. The natural line of elevations denotes this. It is, in fine, the transverse Wasserochied, between the Hudson's Bay and the St. Lawrence waters, and those of the Gulf of Mexico.

It is impossible to visit this remote summit, to which the French apply the term *Hauteur des Terres* , and examine its oceanic dunes, gravel beds, sand plains, and other characteristic features, without supposing the present condition of its surface to be the result of oceanic currents, however produced, which at a very ancient period of the globe's history, poured their waters over these heights, surcharged with the ruins of broken strata and disrupted formations which once spread over the area north of them.* Whether ice had any influence in this distribution, let Mr. Agassiz decide. We observe, amidst the heavy beds of comminuted sandstones and slates, and primary rocks from remote positions, very widespread evidences of trap and greenstones, grauwaches and amygdaloids, which tell the prostration of volcanic formations, with all their peculiar imbedded minerals and veinstones. Of these latter, the harder varieties of the quartz family, with zoned agates, and less abundantly, chalcedonies and carnelians, are found, both in the dry drift, at the highest elevations, and about the shores

* Geological report of the Expn. of 1820, War office, Washington.

116 of lakes and streams. These masses have been carried, by fluviatile action, down the Mississippi valley, to great distances, suffering more and more from the force of attrition. They are often picked up very well characterized, on the shores of Lake Pepin. I have traced them as low as St. Louis and Herculaneum.*

* View of the Lead Mines Missouri, 1819.

It is a peculiar feature of the Irasea summit and its various steppes, that it has a subsoil or deposite of an aluminous or impervious character, resting below the various sand plains, loams, and loose carbonaceous and lacustrine beds. This appears to be the true cause of the retention, at these heights, of a vast body of water, in the shape of lakes, which are of every imaginable size, from half a mile to thirty miles in length. It will not be too much, perhaps, to say, that ten thousand of these lakes exist within our borders, north of latitude 44°. These lakes in the drift stratum, so remarkable for their number, consist of transparent, most often very pure water, the temperature of which is generally 8° to 10° below that of the atmosphere, (vide Schoolcraft 'S nar. jour. pub. Ex. of 1820. p. 168 &c.) They are supposed, in several districts, to have a subterraneous communication with each other, whereby their purity and liveliness is preserved, without visible outlets. The water that sustains such a system of lakes and rivers, is manifestly the result of the condensed vapors of the ocean, which have been wafted from warmer latitudes, and condensed on these broad eminences.

The lakes of the sub-mountain region of Minnesota may all be considered as falling under two classes, those with clean sandy shores, and a considerable depth, and those whose margins consist of a sphagnous character, and abound in the *zizania palustris* , or wild rice, and are comparatively shallow. The former yield various species of fish. The 117 latter serve not only as a store house of grain for the natives, who gather it in August and September, but they invite myriads of water fowl into the region, and thus prove a double resource to them. It is constantly affirmed, that fish are taken in lakes which have no visible outlet. Same of the larger open lakes connected with the Mississippi, yield even

the white fish, which is so celebrated in the upper lakes—while in no case has fish of this species ever been found in the Mississippi itself.

For the country around the sources of the Mississippi, extending to the Lake of the Woods, and the old Grand Portage of Lake Superior, there should be deducted from the area of profitable agriculture, about 60,000 square miles. Some portion of this, as the angle west of Lake Superior, extending to the Lake of the Woods, and the source of the St. Louis river, and the Sandy Lake summit, is nearly all naked rock, of the primitive and volcanic kinds, and is entirely valueless for the purpose of agriculture. Another portion of it, reaching across the actual head waters of the Mississippi to the high ground of the Otter Tail Lake, and Itasca summit, has a large proportion of arid sand hills and plains, and an almost illimitable number of lakes and *Muskeegs* .* The proportion of fertile lands in this area, is rendered less valuable than it otherwise would be, from its isolation by these waters and barrens, and the impracticability of connecting them by roads. West of the *Hauteur des Terres* , the lands are fertile, consisting of woods and prairies, are easily traversed, and are capable of constituting valuable agricultural settlements. Probably three degrees of latitude, south of 49°, may be considered the extent of this tract.

* Geological Report, 1820.

This region has been considered as a central point for the Fur trade. It has been noted from the first settlement of 118 Canada, as abounding in the small furred animals, whose skins are valuable in commerce. Its sources of wealth, to the native tribes, have been in the articles received in exchange for their skins. It has at the same time, had another singular advantage from the abundance of the native grain called *monomin* or rice, by the Indians, which it spontaneously yields. Its lakes abound with water fowl and fish. Its forests and valleys yield a sufficiency of the acer sacherinum, to enable the natives to make maple sugar; and if the Territory of Hudson's Bay were ceded to the United States, it would form a suitable area for an Indian colony.

Besides the beaver, otter, mink, muskrat, fisher and martin, whose furs are valuable, it yields many of the larger quadrupeds. There are some portions of it, where that remarkable animal still exists, which the Indian calls moz, and the Americans, moose, the largest of the deer species. This large animal, which has nearly the strength of a horse, and resembles it in height, is very wary, and quick of hearing. The least noise disturbs it, and the Indians hunt it with great care. Its flesh is much esteemed by them. Besides the elk, red deer, and common black bear, its western skirts, on the Red river plains, yield the grizzly bear—the lion of the region, if strength is the point at issue. To kill this animal, is an object of prime boasting, with the natives and hunters.‡

‡ Lecture on the natural History of Michigan, 1831.

Portions of the country yield the carriboo, which is an American species of the reindeer —the *Cervux Americanus* . This beautiful and fleet animal, which has a very marked split hoof, is provided with a foot, that enables it to spread it over a considerable surface, at every step, which enables it to walk on the surface of the deepest snows. It subsists during the winter season, on mosses. Its flesh is a 119 most delicious and delicate venison, and its skin is dressed, by the Indian females, for their finest garments.

It is not true, as has been supposed, that the glutton, or hyena of Europe, exists on the sources of the Mississippi. The only species of this family, found by the hunters, is the wolverine—a vicious animal, which will dig up *caches* of provisions, and commit various depredations.

To the naturalist, the region is deeply interesting; but an enumeration of its various productions, would require more time and space than are at our command.

To trace the Mississippi to its source, amidst this maze of pseudo-alpine hills and lacustrine steppes, spreading over half the continent, was not, indeed, a light task. But it was hardly to be anticipated that it should have remained undiscovered for so long

a period after its mouth had been well known; after its central portions had been often described;and even after its channel had been followed up its spreading maze for six or seven hundred miles above St. Anthony's Falls.

It is curious to look into this problem, It is now known, since the publication of the collections of Ternoux Campans at Paris, that the Spanish under Narvaez , discovered the mouth of the Mississippi in coasting the Gulf shore in boats in the autumn of 1527, just six years after the final conquest of Mexico. The Apalachites had told them of a great river falling into the northern side of the gulf; but they were slow to explore it. At length the rage for conquest of a captain who had followed the standard of Pizarro , led to its exploration. The ill-fated expedition of De Soto , and his discovery of this stream in 1541, near the 25° of north latitude, are well known. But it was the only attempt to explore it made by Spain. For more than a century after De Soto's failure, the Mississippi rolled its immense volume to the ocean as a hidden stream. The French, who began to settle 120 Canada in 1608, were long confined to the lower parts of the St. Lawrence, both by their inherent weakness and the enmity of the Iroquois. The overthrow of the Erie confederacy by the latter in 1653, only served to cramp the French enterprise, and exposed them more fully to the ire and scrutiny of this rising power. Even thirty years later in their history, the French trading posts still rested at Sault Ste Marie, St. Ignace, St. Joseph's, and Michilimackinac.

In 1668 Claude Allouez established a mission near the head of Lake Superior. Five years later, namely in 1673, P. Marquette and M. Joliet entered the Mississippi by the Wisconsin, and explored it downwards to the Illinois. About this period a great mind for its energy and the magnificence of its plans arose in France, in the person of Robert de la La Salle , who, if his life had been spared, would have founded a great French empire in the West. It is probable that the ardor of the missionary reports first drew his attention to North America; but, whatever was the cause, he was a man far in advance of his age.

Hennepin , who came over with him during his first visit in 1678, appears to have been the first traveler who saw the Mississippi above the Wisconsin. He left Fort Crevecœur,

which had been erected by La Salle on the Illinois, with a couple of men in a canoe, on a missionary excursion in 1680. After reaching the Mississippi, at the mouth of the Illinois, and exploring its channel for some distance below, (how far is apocryphal), he was taken prisoner by the Nodowessies, a name then in vogue for the Dakotas or Sioux, and carried into their country among the Issati, above St. Anthony's Falls. This name of Issati, after having puzzled inquirers, and cast discredit on Hennepin's narrative of his captivity for more than a century and a half, has recently been found by Dr. Williamson to be the name of the ancient Sioux residence of Mille Lac. 121 Isanta-mde means Knife lake, and from flits ancient seat of the Sioux. their Missouri brethren call all the Mississippi Sioux, Isanyate. We are indebted to Hennepin for the names he bestowed on St. Anthony's Falls and the river St. Francis, which last was the highest point reached by him.

The actual discovery of the upper Mississippi rested here about eighty-three years. La Hontan , who amused the world with a supposititious voyage up its channel to “Riviere La Longue,” never saw it, and discovered nothing. Quebec fell in 1759, and the cession of all new France to the British crown followed in three years. In 1766, three years after the cession, Carver visited the region of St. Peters and the falls of St. Anthony, with enlarged views of discovery; although admitting the utmost point claimed by him, he did not ascend above the mouth of the St. Francis. He published in London a vague map of the sources of the Mississippi, and appears to have been the first traveler who used the word Oregon. It was his notion that the Oregon, now Columbia river, originated on a continental summit near the source of the Mississippi. But his expedition was a failure; and, after crossing the Atlantic, he appealed to ministers in London, in vain, to furnish him means for its further prosecution. The booksellers published his journal to meet his necessities, and employed hacks to fill up the appendix. This was chiefly done by consulting the French authors.

No further attempt to explore its source was made till after the acquisition of Louisiana, a period of thirty-nine years. In 1805, Mr. Jefferson determined to get some more definite

ideas than were then common, of the extent of the newly acquired country, and set on foot the celebrated expeditions of Lewis and Clarke , and of Lieut. Pike .

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Pike did his work like another Ledyard . Leaving St. Louis in 1805, he pushed his way in boats two hundred and thirty-three miles as estimated, and over estimated by him, above St. Anthony's Falls to Pine creek, an eligible point for encampment, south of Crow Wing, or Des Corbean river, which he reached on the 15th of October, where the ice and snow arrested him. He built a block house, encamped his men, and left his heavy baggage at this point. He then went forward on snow-shoes, with hand-sleds, dragged by men, to Sandy lake and Leech lake, and finally from the hatter, with a well-equipped dog train, to the sub-trading post of the north-west company at upper Red Cedar lake. This was the terminus of his journey, which he reached on the 12th of February, 1806. The whole country was then covered with a garb of ice and snow, which forbid further search.

The error of Pike's expedition was his starting too late in the season; but he was a good woodsman and hunter, and not to be disheartened by slight obstacles. The British North West Trading Company then held the country, and having carried on trade with the Indians illegally, their furs and peltries were justly subject to seizure. This put them on their best behaviour with PIKE, to whom they afforded every facility of passing from post to post. They also furnished him rude maps and information of the country, which enabled him on his return, with his own notes and journal, to plat the map that accompanies his “Expedition.” Agreeably to these notes, gathered in the winter, and without personal observation, he places the source of the Mississippi in Turtle lake—a common error of the traders going to Red river, who troubled themselves no further with its exploration than it suited the purposes of their trade. Nor does it appear that, even down to the present day, they 123 ever had a trading post on the main stream above upper Lac Cedre Rouge.

Such were the sources of the Mississippi as depicted by Pike . The information embraced in his map and journal was an immense advance on any that had before been known; nor

was the subject again stirred till some years after the close of the war of 1812. That war opened new views to pioneer enterprise, and population began to press in every direction. Indiana, Illinois, and Missouri were admitted into the Union in rapid succession, and it became an object with the Government to push its line of forts and frontier defences, so as to protect from Indian aggression the outer and expanding line of settlements. In 1818 Mr. Calhoun , who was then Secretary of War, authorized a series of semi-military and scientific explorations in the West. Major Long set out for the Yellow Stone.

I was then in Missouri, having the previous season, explored the geology and mineralogy of the mine country.*

* Views of the Mines, 1819.

Mr. Calhoun's plan was to throw a military cordon around the Far West settlements, and thus to secure them against Indian aggressions. He was, in advance of his time, looking Far West and North West.

A plan for investigating the resources and Indian population of the North West, and for tracing the Mississippi to its source, was prepared by, and confided to, the executive of Michigan. He was furnished with a small escort under Lieut. Mackey and Capt. B. Douglass , U.S. Engineer, and having invited a corps of scientific observers, set out from Detroit in May, 1820, passing to the head waters of the Mississippi by the way of Lake Superior and the river St. Louis. He first struck its waters at Sandy lake, being some two hundred and fifty miles (by water) above the point where Pike had built his block house in 1805. Here he encamped 124 his soldiers and deposited his heavy baggage, and proceeded to trace up the river in two light canoes. He followed it by its windings and savannas, to upper Red Cedar lake—a large and handsome sheet of water, which geographers have since called Cassina or Cass lake, in allusion to his visit. When he reached the inlet of Turtle river, on its north shore, he found the state of the waters unfavorable to go higher. This lake, which Nicollet lays down in north latitude 47° 25 23,

was the terminus of this expedition, which returned by St. Anthony's Falls, &c., to the lakes.

Capt. D. B. Douglass (lately deceased as one of the professors of Geneva College) carefully noted its topography, but never published his map. On concluding the expedition, Governor Cass addressed a memoir to the Secretary of War, recommending the exploration of the St. Peters river and other sections of country. This became the cause of the expedition up that stream, conducted in 1823 by Major S. Long , U. S. A.

By this important expedition, of which my account published early in 1821, gives a narrative, the first outlines of the geology and natural history of the North West are given. The channel of the Mississippi had been critically surveyed and traced for some eight hundred miles above Prairie du Chien, and our knowledge of its general geography and character was greatly advanced. None of our earlier expeditions to explore the West had indeed excited a higher degree of interest in the public mind. It was the first of the modern series of public scientific explorations. Sir Humphrey Davy and Major Rennel commended it.

In 1813 Major Long executed part of the discovery, which had been suggested by Gov. Cass . He traced the St. Peters to its source, and extended his explorations to Lake Winnepeg, and thence homeward by the 125 Lake of the Woods and the Rainy lakes, and through Lake Superior. While he was at Pembina, or thereabouts, a Mr. Beltrami , who had accompanied him from St. Peters, fell out with the party, or the party with him, and took his way back by the Turtle river, the old route of the fur trade, to the upper Mississippi. When this person reached New Orleans, he published a small volume claiming the discovery of the Mississippi in Turtle lake.

It is a peculiar feature in the history of the Mississippi, that this stream has been discovered *in sections* , at long intervals apart. Spread over so many degrees of latitude, and made up of so many and such magnificent tributaries, it has long eluded the explorer.

Neither the expeditions of 1805, nor of 1820, had fixed its actual *source* above the upper Red Cedar lake. This point, having been the historiographer and geologist of the last expedition, I determined to ascertain. In 1832 the Government required my services in that quarter, in the capacity of Superintendent of Indian affairs; and furnished me the necessary means for exploring the remotest part of the Indian territory.

An expedition for this purpose was organized at St. Mary's at the foot of Lake Superior, early in the season. The prime object of the expedition was to terminate, if possible, the existing hostility between the Sioux and Chippewas. The Sacs and Foxes were on the eve of the sanguinary war which broke out that year. It was hoped by the Secretary of War, to arrest it. A *canoe elege* , with an experienced set of voyageurs, carried the U. S. flag. Lieut Allen , U. S. A., with a small detachment of infantry soldiers accompanied me. I had engaged the late Dr. Houghton , an experienced botanist and geologist, to attend me for the purpose of vaccinating the indians, and invited Rev. Mr. Boutwell to accompany 126 me. These, with Mr. George Johnston , as interpreter, and a number of Indian guides, hunters, &c., in all thirty men, completed my party, It was organized on strictly temperance principles. A certain object was to be accomplished in a given time. Discoveries were contingent. We pushed early and late. It was a time of great excitement among the Indians. They had combined, for the last time it is believed, to battle for their country east of the Mississippi.

It was the year of the war under Black Hawk . Eleven tribes had, as I found, confederated in this war and agreed to stand by the Sauk chief; but most of them flinched. We passed Fond du lac and Sandy Lake, where the width of the Mississippi was measured, and the falls of Puckagama, in good time, and reached Cass Lake, the ultimate point of the prior explorations of 1820, *twelve days* earlier in July, than the last expedition. This was sufficient, and insured the object. I encamped on the large island, which by a combination of the names, or fragments of names, of the three prior explorers, was called Colcaspi, the Grand island of the French. To this point I was accompanied by the military escort, under Lieut. Allen , who were completely knocked up, and by all the heavy baggage and

stores. Here I determined to encamp, and leave all the disabled and extra men, and the whole military escort, except its commander, and organize a light expedition to go to its source. A week's time would be sufficient. The water was found high, and the Indians reported such a journey practicable. Ozawindib , or the Yellow Head, the principal chief of the lake, agreed to serve as guide. Five small hunting canoes, of two fathoms length, were provided, so that each of the gentlemen of the party, including Lt. Allen , might have one. Such a canoe would hold one sitter, and a man in the bow and stern. I led the way, at 127 four o'clock on the morning after our arrival, carrying the camping apparatus, extra instruments, and a flag. On reaching the head of this lake, the Mississippi has a striking bend, and winds about. This was avoided, in part, by a portage. On reaching the river again, it soon displayed two islands. A short distance above the last, which the Indians call Tascodiac, rapids commence. The men had frequently to wade. This part of the route was tedious, and the elevation considerable, At length, when he had gone about forty miles and reached the first summit, the vista suddenly opened into a large and beautiful clear lake, with pebbly shores, and a rich foliage. This lake, which is some twelve miles long, the Indians called Pa-mid-ji-gum-aug , or the Cross-water. It lids transversely to the path. The river merely passes through one end. It lies on a summit. This is the most northerly point of the Mississippi, and is in latitude 47°. From this the river is pursued nearly due south. Less than a mile above this lake, we entered another lake of smaller size, which I called Washington Irving's lake. About four or five miles above this, the Mississippi has its ultimate forks—the right being apparently the largest. Ozawindib recommended the left, which I named Plantagnet. It soon expanded at various distances, into two lakes, to which I gave the names respectively of Marquette and La Salle. Late in the day, we entered a third and comparatively large lake, known to the Indians as Kubba-kunna , or the Camp in the Path.

At the head of the latter, in a dense forest of evergreens, we encamped. The next day we trailed through natural meadows, through which the river winds. It receives in this distance the Nai-wa, a tributary from the west. Soon after passing this, we came to rapids and then

falls. To avoid the latter, which the party called Schoolcraft's 128 falls, we made a portage, from the foot of a hill of sand across an elevated peninsula of gravel and boulders, and encamped at the spot where we again struck the river. In the morning we were impeded by a fog. We were now in a region of Alpine plants. Heavy moss hung from the trees. The pines were small, and chiefly of the species of grey pine, or barkoiana, while cedar and spruce were abundant. The margin of the stream has clumps of a kind of grey willow. Fond lilies appear, and we soon entered and passed through a lake, which the Indians all As-so-wa , or Perch lake. We went but little beyond. There was an inlet into which we pushed. We soon grounded, and the guide told us to debark. We were in fact at the head of this branch, and a portage was to be made, across high grounds, to the head of the other fork, or main Mississippi.

While preparations for this were making, we partook of a meal. We had reached a dry elevation. Here the five canoes and appropriate baggage were brought, and each man assigned his load. When all was ready, Ozawindib , throwing his canoe over his shoulder, led the way. It was a most intricate and fatiguing path. Fallen logs, moss, brush, everything, in short, that could impede a traveler. occurred. We had about six miles before us. We traveled it, by what the French call *pauses* . A *pause* is a place of putting down the burden and resting. The Indians have a term of similar meaning. At one spot we walked through a pond, to avoid the thick bramble. Beyond this, we were evidently ascending. We entered on a hilly pine tract. Our old acquaintance, the pinus resinosa, soon began to appear. Our pace increased. We glided through opposing thickets with an exhileration of spirits, arising from the thought, that we were near the goal of our hopes and toils. Presently, as we reached the 129 brow of a ridge, the bright gleams of a lake burst on our vision. It was Itasca Lake! It lay in tranquility and beauty below us. We were soon upon its margin, and when all the party came up, we put our five small canoes into its crystal waters and embarked. Other men may have achieved other triumphs. Niagara was doubtless hailed with triumph when first seen by the French. The mouth of the Mississippi was pointed out, in pride, by Narvaez ; and its channel by De Soto's party; but ours was

a pleasure, heightened by the toil of reaching the actual source of a stream as celebrated as the Mississippi. It was a calm and bright day. The novelty of the scene, kept every eye upon the stretch. We saw the red deer drinking in the margin. The wild duck often flew up before us. Sometimes the French and Indians suspended their paddles to gaze. The whole party were reflected in the water. We encamped upon an island. In this passage we saw the pines in the distance crowning the enclosing hills. On the island, the shells of the tortoise, and bones of fish, were scattered about; also some bivalve fresh water shells. There were elms and cherry trees. I directed the men to cut down several trees, and to peel and plant. a tall spruce in the midst, and to elevate a flag.

This was on the 13th of July, 1832—being 305 years after the discovery of its mouth by Narvaez , and 219 after the actual discovery of' its interior channel by De Soto . An account of this expedition was published at New York in 1834. By this account, it is 3,106 miles from the Gulf of Mexico. Mr. J. J. Nicollet visited this lake, four years afterwards, and took observations, by which he determined its latitude, at the island, to be 47° 13# 35#, and its height above the ocean at 1575 feet. The accompanying sketch of it is copied kern a drawing of Ozawindib .

Itasca lake is about five miles long; it is made up of 8 130 pure springs, gushing from the hills. We found the outlet quite a river, with a swift current. We were two days and nights in the descent of it. There is a cascade, a few miles below the lake, called Ka-bi-ka, which we ran. We found it every way, the largest branch, and about one third longer than the other, or Plantagenian fork. It receives the Pin-id-di-win, and some other tributaries. It lies in the territories of the Muk-und-wa, or Pillager Chippewas.

The Mississippi, whose origin and progress of discovery have now been examined, runs through the Minnesota Territory, dividing it into unequal parts.

Both banks are, in their greatest extent, in the occupancy of the Indian tribes. The true policy to be pursued with regard to them, is to extinguish the Indian title to such portion

of it as is demanded for settlement, on just and liberal principles—to clear it of its Indian population, at the earliest possible moment; and to provide at the same time, for the removal of the tribes to a separate territory, where they may, agreeably to our system, enjoy their own laws, and advance in agriculture, arts, and education. This policy has, it is feared, been violated by the transfer of the Winnebagoes from the neutral ground, in Iowa, to the west banks of the Mississippi, between the Watab and the *Des Corbeau* rivers. They could not remain in Iowa, but they can not permanently prosper in Minnesota. This showing of a tribe from State to State, is merely putting off the evil day. The Indian Office. which acted on this subject prior to 4th of March, 1839, was undoubtedly misled. The Chippewas sold this fine tract without ever having occupied, it, except as hunting grounds. It was a portion of the wide space of country over which that, widely spread tribe roved, and went to war against the Sioux. It was awarded to them in the adjustment of their boundaries, at the treaty of Prairie du Chien, in 1825; but they never 131 had a village upon it; the consequence was, that they readily parted with it, in 1838. But this tribe, who adhered tenaciously to their lands east of the Mississippi, and above the line of the *Des Corbeau* , could not foresee that in a very few years their enemies, the Sioux, must retire west from the whole line of the Mississippi, and give place to the white population.

There can be no doubt that this valuable tract of country so acquired, will in a few years be occupied by our people, up to the Des Corbeau or Crow Wing river. Fart Gaines which protects it, is but six miles below the latter, on the west bank. Its occupation by an Indian tribe would have been the less excusable if we could flatter ourselves that the Department had not been misled by persons who had no higher view than to bring the Winnebagoes from the neutral ground in Iowa, where they were undoubtedly deteriorating and becoming poor subjects of profitable commerce, into a new country, where they must, for a time, recruit in their affairs; where, in the mean time, they would serve as a barrier between the Sioux and Chippewas; and where at least, the expenses of *one* trading house, instead of *two* , would serve them and the Chippewas together. But how are the Winnebagoes

permanently to flourish on lands where large game is scarce, where they will soon be within the jurisdiction of a State, and where they caroler permanently remain ?

Allusions have been made to the war between the Sioux and Chippewas. These two warlike and leading tribes occupy nearly the entire area of Minnesota, east and west. They are hostile races, and are, in every respect, antagonistical. The one is a prairie, the other a forest tribe. The languages, and, to a great extent, the manners, and customs, are diverse. They have been at variance, time out of 132 mind. To keep them at peace, and to prevent our citizens from suffering the loss of life and property, in consequence of their hostilities, has been a prime object of our national policy. In this, but little can be done, without the strong arm of military power. Disturbing causes are now in operation, which must, in a few years, be severely felt. Such is the Winnebago colony—the *bois brule* question, the failure of game, but *above all* , the call for new cessions, of land. The great Dakota race, barbarians in manners, and intent on hunting alone, must soon leave the banks of the Mississippi; they will if they follow the example of other Indian nations, turn and fight *first* . And the surest guarantee of preserving peace on the frontiers, will be to plant strong and efficient garrisons on the west and north-west boundaries of the country. It is essential, at all times, to watch the intercourse—to protect them from other tribes. and from settlers—and to lead them on, by just examples, to perceive the superiority of agriculture and arts, and civic laws, to the precariousness and wild mysticisms and maxims of the hunter state.